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THE DEMOCRATIC PEACE UNRAVELED: IT'S THE ECONOMY

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The Democratic Peace Unraveled: It's the Economy

Recent research indicates that the democratic peace—the observation that democratic nations rarely fight each other—is spurious: that advanced capitalism accounts for both democracy and the democratic peace (Mousseau 2009). This is not a trivial prospect: if economic conditions explain the democratic peace, then a great deal of research on governing institutions and foreign policy is probably obsolete. This study addresses all the recent defenses of the democratic peace and reports new results using a new measure that directly gauges the causal mechanism of contract flows dependent on third-party enforcement. Analyses of most nations from 1961 to 2001 show contract-intensive "impersonal" economy to be the second most powerful variable in international conflict—following only contiguity—and, once considered, there is no evidence of causation from democracy to peace. It is impersonal economy, not democracy or unfettered markets, which appears to explain the democratic peace.

The democratic peace—the observation that democratic nations rarely, if ever, fight each other, even though they often fight non-democratic nations—is easily the most significant research program in the study of international politics, with over three hundred books and articles published on the topic over the past two decades. This attention is warranted because the democratic peace has been one of the most illuminating clues we have had for comprehending the workings of international politics. It has also endured many challenges, so many that some have expressed a reluctance to accept evidence against it (e.g. Dafoe 2011: 14; Weede 2011: 5).

Yet in recent years a new challenge to the democratic peace has emerged: the "capitalist" peace (Schneider and Gleditsch 2010). There are two kinds of capitalist peace theories. Free market theories are in the neo-classical liberal framework, broadly defined, as they assume that unfettered markets are the primary source of wealth, and identify peace among advanced capitalist states resulting from less government ownership of property or less government regulation, including regulation of foreign trade and investment (Weede 1996, 2011; Gartzke et al. 2001; McDonald 2009). My own economic norms theory, in contrast, makes no neo-classical liberal assumption regarding the spontaneity of markets; in its application to international relations it can be said to predict a "capitalist" peace because it identifies how economies where most actors pursue wealth in the market have common interests (Mousseau 2000). In contrast to the free-market theories, economic norms theory disregards regulatory policies and highlights instead socioeconomic conditions, and thus can be called "social-market" theory (Mousseau 2009).

While the evidence today links free markets and social markets with peace, only the social-market economic peace offers both an explanation for why advanced capitalism and democracy go together as well as corroborative evidence for it.[1] The basic argument is simple: because only impersonal forms of contracts require third-party enforcement, only economies where most actors pursue wealth in the market require the impersonal democratic state to ensure the unbiased credibility of contract enforcement; in personalist economies individuals rely mostly on personal trust and thus have little need for an impersonal state (Mousseau 2000). Moreover, dependency on an impersonal market means dependency on the health and welfare of all others in the market, and since others in the market can be both inside and outside a nation, and because the robustness of a market depends on the credibility of the commitments of its members, dependency on a market makes war, even the threat of any significant form of violence, virtually impossible, within and among nations.

With the causal mechanism of impersonal economy assessed directly with a binary indicator of impersonal contracting within nations, I have reported (Mousseau 2012a) showed that nations with impersonal economies do not have armed civil conflicts, let alone wars, and corroborated (Mousseau 2009) prior predictions (2000; 2002) of a peace among nations with impersonal economies—and consideration of this peace renders the democratic peace insignificant. This economic peace is also far more substantial than the democratic one: while the democratic peace achieved fame with its claim of an absence of wars among democratic nations—with "wars" defined as militarized conflicts with at least one thousand battlefield-connected fatalities—the

social-market capitalist peace boasts an absence of wars and the absence of a single battlefield-connected fatality among nations with impersonal economies.

This economic challenge to the democratic peace has not gone uncontested. Russett has speculated that democracy might be revived if control is added for regime differences (2010: 201); Dafoe offers that the moderate correlation of democracy with impersonal economy means only that impersonal economy is a conditional, rather than a confounding, variable in the democratic peace; and that democracy survives if the democracy measure is made far more restrictive (2011: 3).

This study re-examines the economic challenge to the democratic peace by examining all claims against it. New analyses of most nations from 1961 to 2001 are carried out. First, a new continuous measure of impersonal economy is introduced, providing a solution to the perfect prediction problem that results from the perfect correlation between the binary measure of impersonal economy and peace in analyses of fatal militarized interstate disputes. Second, crucial tests are performed with analyses of all militarized conflicts, not just fatal ones, to see if the new binary maximum measure of democracy (Polity +10), put forward by Dafoe (2011), can save the democratic peace hypothesis. Third, key tests include control for differences along the democracy-autocracy dimension, to see if this dimension may explain the insignificance of the democratic peace. Finally, the impact of impersonal economy is examined in head-to-head tests with alternative "free market" measures of capitalist peace. The results are clear and clean: once impersonal economy is taken into account, there is no evidence of causation from democracy or free-market capitalism to peace; it is far more likely that impersonal economy accounts for both democracy and peace.

The democratic peace is well known and need not be reviewed here, so I begin below by differentiating the two kinds of capitalist peace theories: free market and social market.[2] In the following section the issue of whether the capitalist peace can account for the democratic peace is discussed, setting the stage for the analyses of the following section. The implications of the test results are not trivial: The role of democracy as a factor in international politics must be earnestly reconsidered, as it is impersonal economy, not democracy or free markets, which appears to cause the phenomena known as democratic peace.

TWO APPROACHES TO CAPITALIST PEACE

The Free-Market Peace

Neo-classical liberal theory claims that markets emerge spontaneously (Hayek 1976), and wealth has long been associated with liberal democracy (Burkhart and Lewis-Beck 1994). Weede links these strands of thought to argue that the democratic peace is no more than "a mere component of the capitalist peace" (2011: 2), with capitalism and unfettered markets assumed as "synonyms" (ibid. footnote 1). Alternatively, Gartzke and colleagues (2001) have shown how less regulated trade across borders can avert war. With the neo-classical assumption that open capital markets cause capital flows, it follows that nations with open capital markets are more

likely than others to pay a cost when making a militarized threat—the cost of capital fleeing the risk of war. Nations that bear this cost signal their resolve, increasing the likelihood of their adversaries accommodating their demands and averting war.

McDonald (2009) defines "capitalism" as private property, with capitalist nations those whose states possess less property than others. Public ownership is assumed to generate revenue for states, freeing them from raising taxes and thus freeing them from garnering public support in waging foreign wars. Assuming all foreign policy decision makers know this fact, the commitments of nations with smaller portions of their economies owned by the state are thought to be more credible than the commitments of leaders of nations with larger public sectors. Fearon has shown how credibility of commitments may affect the probability of wars between nations (1995).

There is some evidence in support of these views: Gartzke links free markets with peace (2005); Gartzke and colleagues (2001; 2007) report financial openness among states to be negatively associated with militarized conflict; and McDonald reports that nations with larger public sectors are more likely than others to be in militarized conflict (2009). There is a possible weakness in all these claims, however: in every cause the contributors claim to be explaining the peace among the advanced prosperous nations (Garzke 2007: 166; McDonald 2007: 569; Weede 2011: 2), relying on the neo-classical assumption, sometimes only implicitly, that advanced economy is caused primarily by free and unfettered markets. However, none offer evidence for this key link in the causal chain, and the general state of evidence is not supportive: while the association with unfettered markets with wealth may be widely intuitive in some Western cultures, in fact most evidence links prosperity not with unfettered markets but with state policies of intervention and economic redistribution (Gurr et al. 1990; Sachs 2006); and there is no significant correlation of free markets with wealth (Mousseau 2012b).

The free-market theories are all firmly in the mainstream tradition in the study of international relations that treats anarchy exogenously and assumes an inherently competitive world where states with the monopoly in violence are the primary actors. Because war is costly, it is thought that war does not pay, and thus war is thought to occur by mishap, resulting from weak information or from an inability of nations to credibly commit to peace (Keohane and Martin 1995; Fearon 1995). In this way, nations with free markets are assumed to be in perpetual conflict like everybody else, they are just better at avoiding escalations to militarized conflict. Violence is averted not because of common interests but because it is not profitable, or free markets yield better information (Gartzke et al 2001) or make foreign policy commitments more credible (McDonald 2009). As we will see below, the social-market economic peace makes none of these assumptions.

The Social-Market Peace

The social-market model of capitalist peace is deduced from my own economic norms theory (Mousseau 2000, 2009), which starts with the observation, widely documented by economic historians (Polanyi 1957[1944]; North et al. 2009), of two kinds of economies in history:

impersonal and personal. In impersonal economies citizens normally obtain goods and services contracting with strangers in the marketplace, with trust in contractual commitments largely dependent on the credibility of third-party enforcement. In personalist economies, in contrast, individuals are comparatively more dependent on personal relationships, as individuals give or withhold favors, or trust in contractual commitments, in light of prior interactions with individuals they know personally.

Personalist economies have encompassed most of human history and characterize the economies of many nations today (North et al. 2009; Hicken 2011). A well-known historical example is European feudalism, where client serfs pledged loyalty, including military service, to patron vassals in exchange for economic and physical security, with vassals in turn pledging their loyalty to patron lords, and so on. Most contracting that did occur in feudal Europe did not require third-party enforcement mechanisms, as trust usually rested instead on personal ties or, among strangers, taking the form of spot trades and thus without any need for third-party enforcement (Kohn 2003).

Wealth in feudal Europe was based primarily on land, but in many developing countries today, where the market remains comparatively peripheral to everyday life, clientelist relationships are more likely to be centered on accessing state-rents (Hicken 2011: 303). Rather than manors and fiefs, clientelist-oriented groups take a variety of forms, including tribes, clans, neighborhood associations, gangs, mafias, labor unions, religious sects, and political parties. For instance, in an extended family a cousin may do all the electrical work, an uncle may do all injections, and an aunt active in a political party may find local government jobs for various family members—all of whom are obligated in turn to take care of fellow family members, and all family members are obligated to serve her political party as asked, including showing up at rallies. Crucial for the reciprocity of clientelist political economy to work, representatives of patrons continuously monitor the behavioral loyalty of their clients (ibid.: 292-93).

Economic norms theory assumes everybody in all societies seeks goods and services, highlighting that the way goods and services are sought differs according to socio-economy: in impersonal economies the dominant strategy is to contract with strangers located in the marketplace; in personalist economies the dominant strategy is to nourish personal relationships and participate in group struggles over state rents. These divergent strategies for obtaining wealth create divergent individual-level interests, preferences, and outlooks, generating novel insights on the origins of liberal preferences, strong states, democracy and, in anarchic systems, dyadic alignments and rivalries (Mousseau 2000, 2009).

First and foremost, only an impersonal economy, not a personalist one, requires a strong state. Individuals cannot automatically trust the commitments of strangers, so an impersonal economy cannot exist unless the commitments in contracts are widely credible. Third-party enforcement mechanisms can be private (e.g., notaries) or public (government). However, the private enforcement of contracts is costly, so individuals dependent on an impersonal market have an interest in an authority that offers the enforcement of contracts as a public good. For an authority's commitment of contract enforcement to be credible, however, it must have the monopoly on violence over a fixed and declared geographic space. It must also build and

maintain bureaucracies and court systems that are capable of reaching and protecting the contract rights of every actor in the marketplace. In this way, when exogenous factors render the benefits of the impersonal market greater than the benefits of personal ties, members of a society develop an interest their state effectively and efficiently enforcing contracts.

Where the dominant strategy is to pursue goods and services in personal ties, in contrast, there is little benefit from a strong state. Utility is maximized primarily with loyalty to patrons who distribute economic and physical protection with partiality according to loyalty, rank, and service to the group. Patrons, having the loyalty of clients, have the capacity to wage violence; order in these societies is maintained with gift exchanges among patrons that reinforce paths of hierarchy and loyalty among them, as in European feudalism. For those not in groups that control the state, the state is an oppressive force to be evaded; for those privileged in groups with ties to the state, utility is maximized with loyalty to personalities, not the state.

A second change in preferences resulting from an exogenous rise in impersonal economy is for legal equality. For a contract to be credible all parties to it must be equally obligated to its terms. Therefore states that wish to promote impersonal economy must have not only the capacity to protect the contract rights of every actor in the market, but they must also do so with renowned credibility. States wishing to promote markets must therefore construct bureaucracies and court systems that are not only effective and efficient, but also widely recognized as impartial. In personalist economies, in contrast, such credibility is irrelevant, since utility is normally maximized with personal ties and rankings in group hierarchies. For those in groups tied to the state, an impartial and transparent bureaucracy and court system is an economic threat that must be undermined.

In these ways, the impersonal state may be an epiphenomenon of impersonal economy: for the commitments of contracts to be widely credible a state must first exist, and then it must be widely respected as capable and impartial. Property rights theorists reverse this causation, claiming that the state enforcement of contracts is enough to promote contract flows (Clague et al. 1999). Like neo-classical theorists (Hayek 1976) and many in the modern discipline of Economics, property rights theorists assume that markets emerge spontaneously and, related with this assumption, that a dearth of contracting generally indicates a dearth of economic flows of any kind. In contrast, economic norms theory places property rights theory and even the modern field of Economics as special cases of economic norms theory: when a society has market norms, inefficiencies in the state's enforcement of contracts will increase transaction costs, since most most exchanges are contractual in nature. But if a society is characterized with personalist exchanges, any improvement in state enforcement of contracts is largely irrelevant, as most exchanges are personal in nature and thus third-party enforcement plays little role in the economy. For property rights theorists and others, governing institutions affect economic conditions; in economic norms theory political leaders can decide to promote impersonal economy, but it is economic conditions that primarily affect governing as well as social institutions.

Once impersonal economy is correctly understood as a variable rather than a constant, it is easy to see the third way preferences can change with a rise in contract flows: a rise in

impersonal economy can promote an interest in freedom. For anyone dependent on the impersonal marketplace, a larger market offers more opportunities than a smaller one. Individuals seeking wealth in the market thus have interests not only in their own freedom to contract, but also in the freedom of everyone else to contract. There is no apparent reason to limit this interest to one's own ethnic group, religious sect, or nation. Citizens in impersonal economies thus have interests not only in their states protecting individual rights at home, but in their states promoting the rights of others abroad.[3] For individuals seeking wealth in personal ties, in contrast, there is no apparent interest in the freedom of strangers, because there is little to be gained from strangers located in a market; nor is there much interest in one's own freedom because for tactical reasons the incentive is to at least appear to conform with alacrity to group norms and values.

While the economic norms model as presented thus far has assumed instrumental rationality—that citizens identify their interests based on the information available to them—the theory works just as well, perhaps better, with the recognition of bounded rationality (Mousseau 2009: 58). Introduced by Herbert Simon in the 1950s, bounded rationality draws on the fact that it is not rational to be rational: many goals can be reached more efficiently by forming decision making habits, or heuristics, for situations that arise routinely (Simon 1955). As applied here, individuals routinely dependent on trusting strangers in contract will develop the habits of trusting strangers and preferring universal freedom and rights, and strong and impartial states for protecting these rights. Individuals in personalist economies will develop the habits of trusting and caring for others within their in-groups, abiding by the commands of patrons, and distrusting those from out-groups, including their states. In this way, citizens in impersonal economies will perceive an interest in freedom and democracy and promoting these institutions for everyone, even though most, acting on bounded norms rather than on instrumental rationality, do not know why they have these universalistic liberal values. Individuals in personalist economies, in contrast, will be comparatively more susceptible to the appeals of those who offer strong in-group identities and warn against the threats of outsiders, even though most, acting on bounded norms rather than on instrumental rationality, do not know why they are susceptible to such fears or why they place such great value in loyalty to their groups and group leaders.

In these ways, it is easy to see how a rise in impersonal economy can legitimate liberal democratic institutions—and also why nations with impersonal "capitalist" economies will be in peace. James Fearon has highlighted that, because interstate war is costly, there should always be peaceful solution that both sides prefer to fighting (1995). This deduction requires, however, the unitary actor assumption (ibid.: 379). Drawing on Fearon's instructive framing, economic norms theory can show how war can be preferred when at least one side has a personalist economy.

Recall that personalist political economy is zero-sum like: a gain in state rents for one group must always equal a loss for another. It follows that ruling groups within nations—whether democratically elected or not—have little incentive to produce public goods, preferring the distribution of private goods to supporters. In this way, foreign war can serve two purposes. First, it can be in the economic interests of the ruling coalition of in-groups, with its costs imposed on repressed out-groups. Iraq in the 1980s serves as an example: hundreds of thousands from all groups died in its wars for territory (against Iran) and oil (against Kuwait and others),

but the primary economic beneficiaries of these wars were to be the clans and tribes of the ruling coalition. A role for public goods provision in interstate conflict has been highlighted by Bueno de Mesquita et al. (1999). While democracy might mitigate the constraints on public goods provision, economic norms theory predicts this constraint from economic rather than democratic institutions.

The second motive for war for clientelist nations is as a means for ruling group coalitions to stay in power. Because individuals are normally loyal to their groups, not their states, personalist states tend to lack widespread legitimacy and are thus less stable than impersonal states. In addition, the zero-sum nature of their political economies means that ruling groups must continuously seek wealth for supporters and, as a consequence, repress out-groups who can be allotted few if any state rents. Yet repression is costly. To reduce this cost many state leaders have learned to play on personalist bounded norms by propagandizing the state as an in-group patron providing economic and physical security to all: that is, ruling groups have learned to foster nationalism. Nationalist identities, however, require an out-group. The most convenient and successful way to foster a nationalist identity is to maintain a quarrel with another state. Because most borders have been adjusted at some point in history, border disputes are simple and convenient to concoct—and in this way economic norms theory predicts enduring rivalries among personalist states that share land borders.

Impersonal economy, in contrast, is positive-sum like: any improvement in the welfare of anyone else in the market increases the odds that one's own welfare will improve. Everyone in the market thus has a principal interest in the public good of ever expanding growth in the market. While some individuals might rank some other preference or preferences higher than market growth, more individuals rank market growth at or near the top of their preference ordering than they do any other preference, and as a result the voter preference for market growth is Pareto optimal: in an impersonal political economy there is no other preference that a citizenry, as a group, will rank higher. Since impersonal states are largely democratic, successful political parties have learned that performance in fostering market growth, rather than the promotion of fears of others, is the winning strategy for staying in power. While nationalist, religious, and other identity issues may at times exist, the dearth of collective bounded norms means that these issues are almost always outweighed by constituent demands for market growth. Economic norms theory thus offers what could be vital conditionality to diversionary theories of war-making (Levy 1988): nations with impersonal economies may be immune from this malady.

It follows that among neighbors with impersonal economies, the main purpose of borders is not to distinguish national or cultural identities, which can cross borders, but to determine which state is tasked with enforcing contracts in a region. The settlement of border disputes is thus akin to the settlement of trade disputes: since each state foremost desires economic growth, a peaceful resolution is always reached, as there is always a set of negotiated settlements that both sides prefer to fighting. Nor are disputes of any kind allowed to linger: uncertainty inhibits market growth, so when disputes among impersonal states do arise they are predicted to be resolved not only peaceably but also quickly.

The social-market economic peace is more than just a dearth of conflict, however: these states have common foreign policy interests. Successful political parties of impersonal states have learned to promote exports to enhance market growth, and in this way nations with impersonal economies share a common interest in the vitality of the global marketplace. Personalist states, because they are most interested in the distribution of private goods to supporters, are comparatively less interested in promoting the public good of market growth and, as a consequence, have comparatively less interest in the global market.[4] There are two implications from this insight. First, to enhance the credibility of contractual commitments a market requires law and order, which is vital for contractual commitments to have credibility. In this way, impersonal states fundamentally agree that any actor, state or non-state, that threatens global order must be opposed; if violations are unopposed the credibility of contractual commitments can become suspect, increasing the risk of global divestment and economic contraction. Second, because growth in the global market is a public good for everyone in the market, there can be few relative gains concerns among impersonalist states; in fact each has an interest in the health and well being of all others in the market. The upshot is that impersonal states not only avoid militarized conflict with each other: they are in natural alliance.

CAN A CAPITALIST PEACE TRUMP THE DEMOCRATIC PEACE?

A relationship may be spurious when we have reason to believe a third variable may account for both the *explanans* and the *explanandum* (Blalock 1979:468-474; Thompson and Tucker 1997: 434-435; Ray 2003). In the democratic peace research program many variables are estimated in regression models, but are not potentially confounding because they are not accompanied with theory that offers an account for both the *explanans* (democracy) and the *explanandum* (militarized interstate conflict). Examples include alliances, relative capability, and contiguity.

Of the three free-market capitalist peace theories, only one explicitly offers an explanation for democracy: as discussed above, Weede argues that if free markets promote prosperity, and prosperity promotes democracy, than free markets can be the ultimate cause of the democratic peace (1996; 2011). However, there is little evidence for this key link in the causal chain: in fact most research links wealth not with unfettered markets but with state spending and redistribution policies (Gurr et al. 1990; Sachs 2006); nor is it clear that wealth causes democracy: there is no consensus on explaining this tie, and even the observation is under challenge (Acemoglu et al. 2008). Adherents of the other two free-market theories have claimed that their capitalist variables either account for the democratic peace (Gartzke 2007), or are stronger than it (McDonald 2009), but both of these lack theory for how free markets can cause democracy. Absent some mechanism for how a factor might explain democracy, it is not logical to interpret a result as confounding, because it could just as well be reflecting reverse causation, with democracy causing the free-market variables (Blalock 1979: 474). Despite the lack of theory, Gartzke (2007) reports overturning the democratic peace with a measure of capital openness between nations; others have since reported that this result is due to errors in sampling and

specification, with democracy ultimately surviving (Choi 2011; Dafoe 2011; see also Russett 2010).

In contrast to the free-market models, the social-market model explains precisely how impersonal economy can cause both democracy and peace, with further evidence corroborating this path of causation: it is impersonal economy, not development per se, that predicts democratic transitions (Mousseau 2012c). Moreover, direct data on contracting yields a perfect prediction of no fatal militarized conflicts between two nations with impersonal economies, while democratic dyads where neither state is capitalist are not in peace (ibid.). However, these tests did not include control for regime differences, and differences in regime along the democracy-autocracy dimension have been shown to be associated with conflict (Werner and Lemke 1997). According to economic norms theory, regime difference is partly explained by impersonal economy and is thus endogenous and should not be considered in tests of the theory (Blalock 1979:468-474; Ray 2003). However, as discussed above, Russett speculates that inclusion of this control might revive democracy as a force for peace (2010: 201); so below this possibility is examined.

Dafoe offers two reasons democracy must still be considered a force for peace even with the results of Mousseau (2009) (2011; see also Russett 2010:201). First, he claims that the measure of impersonal economy only conditions, rather than confounds, the democratic peace, because 74% democratic dyads in the tests contain at least one state with an impersonal economy, and all these dyads were linked with peace (the 26% of democratic dyads where no state has an impersonal economy were not significantly linked with peace). Unfortunately, Dafoe does not explain how these results show causation, even if only conditional, from democracy to peace. Moreover, this conclusion can be reached only by ignoring the evidentiary implications of the regression at hand, which reports a corroborated novel prediction of a theory and thus joins a large stream of evidence in support of economic norms theory, and this theory clearly predicts democratic transitions and peace without any reliance on democracy itself as an independent causal factor in the peace.

The second reason Dafoe offers that Mousseau (2009) does not overturn the democratic peace is that, upon analyzing Mousseau's data, he reports that if a new and highly stringent binary measure of democracy is adopted instead, with democracies defined as only those at the highest possible Polity score of +10, that it too, like Mousseau's binary measure of impersonal economy, yields a perfect prediction of an absence of fatal militarized disputes (2011: 3). Since perfect prediction yields quasi-complete separation in the offending variable, it is impossible to tell from a regression which factor, impersonal economy or democracy, is the more likely cause of the peace.

As far as I know, the Polity+10 measure has not previously been applied to the democratic peace; it is also an explicit post-hoc response to my challenge to the democratic peace. This is not to imply that changing a measure after-the-fact is necessarily improper: knowledge can sometimes progress with post-hoc adjustments to theories and measures. The weakness of theory informing us how to measure democracy—itself an indication of the comparatively poor quality of many of the democratic peace theories—does encourage experimentation with the measure.

Rather, my point here is that scientific procedure calls for recognition that post-hoc adjustments to measures can go on ad infinitum, ultimately rendering a theory or hypothesis unfalsifiable. This was the problem Lakatos sought to address as he developed a standard for gauging emendations to research programs (1978[1970]). Using Lakatosian standards widely used in the field of International Relations (e.g. James 2002), Dafoe's post-hoc adjustment in the measure of democracy is clearly degenerating, since he offered no excess empirical content obtained from the emendation, and his explicit motivation was to save the democratic peace hypothesis. A move to +10 democracy also brings with it the troubling question of whether all the studies of democratic peace over the past two decades would have obtained the same levels of significance if the +10 measure had been adopted, given that it would have left far fewer democratic dyads in the samples. For this reason, Lakatos would consider Dafoe's finding with Polity+10 democracy trivial and uninteresting (Lakatos 1978[1970]: 87-88).

The analyses below revisit the democracy and capitalism debate. Because it is already known that the free-market models do not overturn the democratic peace (McDonald 2009; Choi 2011; Dafoe 2011), the tests begin by addressing the recent defenses of the democratic peace in light of the social-market model (Mousseau 2009), followed by tests including the free-market variables.

ANALYTIC PROCEDURES

The analyses are constructed in accordance with the standard procedures used in the democratic peace research program. The unit of analysis is the non-directional dyad-year, with militarized conflicts identified as the original (day one) disputants in the conflict as codified in the Correlates of War Militarized Interstate Dispute data set (Ghosn, Palmer and Bremer 2004).[5] Following the general trend in conflict studies, to save space I primarily report results of analyses of fatal militarized interstate disputes, since non-fatal disputes are more likely than fatal ones to be unreported (Mousseau et al. 2003: 291), and because Mousseau (2009) analyzed fatal disputes. Still, all the analyses were repeated with all militarized disputes (fatal and non-fatal) with almost identical results (the only exception is noted below). Data for most variables were obtained using the EUGene data generation program, version 3.204 (Bennett and Stam 2000). Like the dependent variables, most of the independent variables are conventional to the conflict studies literature, so to save space their theoretical justifications can be reviewed elsewhere (Russett and Oneal 2001; Mousseau et al. 2003) and data sources and measures are listed at the bottom of Tables 1 and 2. The exception is the measure for impersonal economy, which is discussed at length below. All data are available for replication purposes at www.http/anonymous.

Measuring Impersonal Economy

Economic norms theory pinpoints causation originating in micro-level dependency on an impersonal market. Dependency on contracting with strangers located in the impersonal market creates an interest in an impersonal state that credibly and reliably enforces contracts as well as

an interest in the health and well-being of strangers in the market, rendering war against anyone in the market too costly to carry out (Mousseau 2000). Yet not all contracting implies dependency on an impersonal state: many contracts take the form of spot trades, where goods are fully exchanged at one time and place and thus require no third-party enforcement; other contracts are personalized in form, with credibility in commitments resting to some extent on personal trust among the contractees.

The ideal measure of dependency on an impersonal market would therefore be a count of actual contracts, and include only those contracts that require third-party enforcement. Fortunately such data are available: contracts in life insurance. Life insurance contracts cannot take the form of spot trades because the commitments of insurers must occur after the commitments of policyholders. They cannot rest on personal trust among contractees, and the threat of the loss of future contracts in the event an insurer fails to fulfill its commitments, because the delivery of service is expected only after the relationship ends with the death of the policyholder. Perhaps most importantly, because the purpose of a life insurance contract is to promote the economic security of one's closest family members, data on life insurance contracting is a seemingly direct a gauge of the theorized causality of micro-level economic dependency on an impersonal market.

Data on life insurance have been compiled under the auspices of the World Bank (Beck and Webb 2003) and are available for 64 of the 157 nations identified as sovereign by the Correlates of War Project (Small and Singer 1982) and otherwise available for analysis.[6] To assuage concern that the test results below may be due to a bias caused by missing data, I follow the recommendation of Gary King and colleagues and report results with missing values estimated using secondary data (2001; see also Gleditsch 2002). Missing values are not a blank slate: we know a great deal about political economies from a variety of sources, and personal and impersonal economies are very different from one another in a number of dimensions. Tests confirm that the following variables yield an imputed measure that correlates at 0.97 with the original data: per capita private consumption (kc) and investment (ki); ratios of kc and ki to foreign trade; energy consumption per capita; communist economy; post-communist economy; oil-export dependency; population; and various controls for regions and sample size variations that occur over time. The extremely high correlation of the predicted measure with the original data indicates that the imputed values yield a highly reliable estimate of the missing values. I call the variable of life insurance contracts in force, measured as the natural log of U.S. dollars per capita, *Contract Intensive Economy* (*CIE*).[7]

RESULTS

Model 1 in Table 1 reports the null model of democratic peace in analyses of fatal militarized interstate disputes as reported in multiple studies. As expected, the coefficient for $Democracy_L$ (-0.06) is negative and significant at the standard 0.05 threshold. Since this variable indicates the level of democracy of the state with the lower level of democracy in the dyad (subscript L for *lower*), high values mean both states are highly democratic and this coefficient corroborates the

democratic peace. All remaining variables perform as expected, as in prior studies, and need not be reviewed here.

Model 2 presents new knowledge by adding the control for impersonal economy. To capture the dyadic expectation of peace among impersonalist nations, the variable Contract-Intensive $Economy_L$ (CIE_L) indicates the value of impersonal contracts in force per capita of the state with the lower level of CIE in the dyad; a high value of this measure indicates both states have impersonal economies. As can be seen, the coefficient for CIE_L (-0.81) is negative and highly significant. This corroborates that impersonal economy is a highly robust force for peace. The coefficient for $Democracy_L$ (0.02) is now in the positive direction, though not significant. There are no other differences between Models 1 and 2, whose samples are identical, and apart from Mousseau (2009), no one has examined any role for contract flows in the democratic peace. Therefore, the standard econometric inference to be drawn from Model 2 is the non-trivial result that all prior reports of democracy as a force for peace are probably spurious; a result predicted and fully accounted for by economic norms theory.

CIE_L and $Democracy_L$ correlate only in the moderate range of 0.47 (Pearson's *r*), so the insignificance of democracy is not likely to be a consequence of multicollinearity. This is corroborated by the variance inflation factor for $Democracy_L$ in Model 2 of 1.45, which is well below the usual rule-of-thumb indicator of multicollinearity of 10 or more. Nor should readers assume most democratic dyads have both states with impersonal economies: while almost all nations with contract-intensive economies (as indicated with below-median values of CIE) are democratic (Polity >6) (Singapore is the *only* long-term exception), more than half—55%—of all democratic nation-years have personalist economies. At the dyadic level in this sample, this translates to 80 percent of democratic dyads (all dyads where $Democracy_{Binary6} = 1$) have at least one state with a personalist economy. In other words, not only does Model 2 show no evidence of causation from democracy to peace (as reported in Mousseau 2009), but it also illustrates that this absence of democratic peace includes the vast majority—80 percent—of democratic dyad-years over the sample period.

Nor is it likely that the causal arrow is reversed—with democracy being the ultimate cause of impersonal economy and peace. This is because correlations among independent variables are not calculated in the results of multivariate regressions: coefficients show only the effect of each variable after the potential effects of the others are excluded. If it was democracy that caused both impersonal economy and peace, then there would be some variance in $Democracy_L$ remaining, after its partial correlation with CIE_L is excluded, that links it directly with peace. The positive direction of the coefficient for $Democracy_L$ informs us that no such direct effect exists (Blalock 1979, 473-474).

Models 3 and 4 test for measurement and underspecification errors in Model 2. Model 3 replaces the continuous democracy measure with the standard binary one (Polity2 >6), as suggested by Russett (2010: 201), citing Bayer and Bernhard (2010). As can be observed, the coefficient for CIE_L (-0.79) remains negative and highly significant, while $Democracy_{Binary6}$ (0.24) is in the positive (wrong) direction. Model 4 tests for the effect of $Democracy_L$ if a control is added for mixed-polity dyads, as suggested by Russett (2010: 201). As can be seen, the

coefficient for *Regime Difference* (0.06), gauged in standard form as the higher democracy score in the dyad minus $\text{Democracy}_{\text{L}}$, is positive and significant, confirming that regime mixed-polity dyads do indeed have more militarized conflict than other dyads.[8] Yet, the inclusion of this term has no effect on the results that concern us here: CIE_{L} (-0.86) is now even more robust, and $\text{Democracy}_{\text{L}}$ (0.04) is now even more robust in the positive (wrong) direction. Unreported, a substitution of $\text{Democracy}_{\text{L}}$ with $\text{Democracy}_{\text{Binary6}}$ in this model yields a positive coefficient that is even significant at the 0.10 level using a one-tailed test. It thus appears that, if anything, democracy is a source *for* militarized conflict among nations, possibly a consequence of the in-group/out-group politics of personalist democracy. In fact, this latter possibility may account for Mansfield and Snyder's observation that newly-democratic regimes are more likely than other states to engage in foreign conflicts (2005), given that most nations experimenting with democracy tend to have personalist economies.

As discussed above, analyses of fatal dispute onsets with the far stricter binary measure for democracy (Polity = 10), put forward by Dafoe (2011) in response to Mousseau (2009), yields perfect prediction, as does binary CIE_{L}, causing quasi-complete separation and inconclusive results. Therefore Models 5 and 6 reports the results with $\textit{Democracy}_{\textit{Binary10}}$ in analyses of all militarized conflicts, not just fatal ones. As can be seen, the coefficient for $\text{Democracy}_{\text{Binary10}}$ (-0.53), while negative, fails to reach significance. Model 6 examines the effect of this measure after taking into consideration Regime Difference. The coefficient for $\text{Democracy}_{\text{Binary10}}$ (-0.15) is now closer to zero. As mentioned, Models 1 through 4 were repeated (but unreported to save space) with analyses of all militarized interstate disputes, with identical results obtained. Therefore the conclusions reached by Mousseau (2009) are corroborated even with the most stringent measure of democracy, inclusion of Regime Difference, and across all specifications: the democratic peace appears spurious, with impersonal economy the more likely explanation for both democracy and the democratic peace.

Table 2 examines if wealth and the free-market factors can account for the effect of impersonal economy. The first column reports the correlation of each factor with CIE_{L}, showing that all of the correlations with CIE_{L} are well below the rule-of-thumb danger zone of 0.70 or higher.[9] Nor does any variable in Table 2 yield a variance inflation factor above 1.75, which is well below the rule-of-thumb threshold of 10.

As can be seen in Model 1, the coefficient for CIE_{L} (-0.70) remains negative and highly significant even with control for $\textit{Wealth}_{L}$ (0.24), which is not significant. Most relatively wealthy states with personalist economies are communist regimes or oil-exporting states, both of which are often highly personalist regimes, with authorities distributing rents with partiality. Examples include Iraq, Russia, Saudi Arabia, and the USSR.

As can be seen in Model 2, the coefficient for CIE_{L} (-0.62), while slightly smaller than it is in Model 1, is still highly robust with control added for $\textit{Trade}_{L}$ (-1.46), which is also negative and significant. The significance of Trade_{L} is reasonable: while economic norms theory predicts nations with impersonalist economies to trade more than other nations, as measured here following convention, Trade_{L} indicates the extent at which the two economies in a dyad are interdependent, not the extent at which each one trades in the global economy. In addition,

economic norms theory predicts market norms to cause advanced economy (Mousseau 2012a), which would work, ceteris paribus, to make impersonalist nations less dependent on the global economy. We should thus expect some correlation of CIE_L and $Trade_L$, but it is not inconsistent with the theory that $Trade_L$ has an independent pacifying impact on militarized conflict in ways argued by Russett and Oneal (2001), as a factor that increases the cost of war, or by Gartzke et al. (2001), as a signaling mechanism.

Model 3 examines if capital openness (Gartzke et al. 2001) can account for the impact of impersonal economy.[10] However, Choi (2011) and Dafoe (2011) report serious sample bias caused by listwise deletion of missing data in the variable *Capital Openness*$_L$. Analyses of this variable have suffered from ad hoc methods of (i) list-wise deletion (Gartzke 2007), which requires the missing data to be MCAR (missing completely at random) assumption and (ii) imputation of missing values with a zero (Gartzke and Hewitt 2010), which requires the contradictory MNAR (missing not at random) assumption. What is more, the missing data encompass almost half of the fatal dispute onset years (59 out of 126 onset years) over the period of 1966-1992, which may cause false positives in coefficient and standard error estimates if these values are assumed as zero by Gartzke and Hewitt (2010) or left as missing as done by Gartzke (2007).

To lessen the biases inherent in these methods, I first interpolated the known values of *Capital Openness*$_L$ and then, following Gartzke and Hewitt (2010), I replaced all the remaining missing values with a zero. This procedure shows that at least 2,194 missing observations are incorrectly coded as zero for this variable by Gartzke and Hewitt (2010), corresponding to 17% of the onset years (21 out of 126). Therefore, caution is necessary in analyses of this variable. As can be seen, the coefficient for CIE_L (-0.61) holds firm, while the coefficient for *Capital Openness*$_L$ (-0.12) is significant only at the lowest threshold. Additional tests of this same model and sample without CIE_L, unreported, show Capital $Openness_L$ to be highly significant (*beta* = -0.20, *se* = 0.05, *p* = 0.000). In analyses of all (fatal and non-fatal) disputes Capital $Openness_L$ is insignificant (*beta* = -0.06, *se* = 0.04, *p* = 0.111) after consideration of CIE_L. With due caution in drawing inferences from this variable, it appears that impersonal economy may account for most of the impact of capital openness on conflict. Just as economic norms theory predicts increased trade among impersonal states, it also predicts capital openness.

Model 4 examines if the size of public sector can account for the impact of impersonal economy. McDonald hypotheses that the size of public sector in only one state in a dyad will increase the probability of militarized conflict (2009: 84), an expectation that can be assessed at the dyadic level with the size of public sector of the state with the higher size, a variable I call *Public*$_H$. As can be seen, the coefficient for CIE_L (-0.74) holds firm, while the coefficient for $Public_H$ (-0.01) is significant but in the wrong direction—indicating that states with large public sectors are less likely than others to engage in fatal conflicts. Additional tests of this same model and sample with CIE_L excluded, unreported to save space, show $Public_H$ to be insignificant (*beta* = 0.00, *se* = 0.01, *p* = 0.648). The negative role for $Public_H$ in conflict after controlling for CIE_L may be a function of rivalries among bordering states with personalist economies, as many nations with personalist economies have small public sectors.[11]

Given the insignificance or weak significance of Capital Openness$_L$ and Public$_H$ in Models 3 and 4, Model 2 in Table 2 yields the best non-theoretically-driven estimate of the causes of fatal international conflict (a true theory-driven estimate would exclude Trade$_L$, which is partially predicted from CIE$_L$). Calculations of the coefficients in this model indicate that impersonal economy is one of the most powerful factors in international politics: only the relatively trivial *Contiguity* and cubic spline variables (which control for temporal dependence and are not reported) have stronger impacts; CIE$_L$ is 20% stronger than the Realist variable *Relative Capability* and 61% stronger than Trade$_L$. CIE$_L$ is also highly robust: even with all the democracy and free market variables put together in a common regression (unreported), the variable remains at the highest level of significance, with and without the variables that cause listwise deletion (Capital Openness$_L$ and Public$_H$). The analyses thus confirm impersonal economy as a powerful force shaping international conflict processes, and neither free-market capitalism nor democracy appear as compelling factors in this regard.

IMPLICATIONS AND CONCLUSION

This article has sought to address the controversy of whether the capitalist peace can explain the democratic peace. Whether or not a capitalist peace can account for the democratic peace depends on whether capitalism can account for democracy as well as peace (Blalock 1979:468-474; Ray 2003). There are two kinds of capitalist peace theories: free-market models link smaller government with peace (Weede 1996; Gartzke et al. 2001; McDonald 2009); the social-market model links impersonal economy with peace (Mousseau 2000). Among these, only the social-market model has been both theorized to account for both democracy and peace (ibid.) and shown to account for the democratic peace (Mousseau 2009; Choi 2011; Dafoe 2011).

Some have pointed out several ways that the results of Mousseau (2009) may not pose a challenge to the democratic peace, and this article was aimed at examining these arguments. First, a new continuous measure of impersonal economy was introduced, solving the perfect prediction problem that results from the binary measure for social-market capitalism in analyses of fatal disputes. Second, all militarized conflicts, not just fatal ones, were examined in crucial tests, to see if the new binary maximum measure of democracy (Polity +10), put forward by Dafoe (2011), can save the democratic peace hypothesis. Third, tests included control for differences along the democracy-autocracy dimension. Finally, the robustness of the social-market economic peace was examined with consideration of measures of free-market capitalism.

The results for democracy are clear and clean: once "capitalist" impersonal economy is taken into account, there is no evidence of causation from democracy to peace; it is far more likely that impersonal economy accounts for both democracy and peace. The use of the highest +10 measure of democracy does not save the democratic peace hypothesis; and democracy remains insignificant with consideration of regime differences. All data and measures are conventional to studies of interstate conflict processes, and the most likely cause of democracy's insignificance is consideration of impersonal economy, since key models are identical in every other way. Nor can the social-market peace be explained by trade or wealth; and the free-market theories of

capitalist peace, size of public sector (McDonald 2009) and capital openness (Gartzke et al. 2001; Gartzke 2007), do not survive rigorous testing or the consideration of impersonal economy at standard levels of significance.

The results of this study must be made clear: there is no scientific justification for inferring or implying from this study any evidence, direct or indirect, of causation from democracy to peace. Furthermore, democracy is not merely insignificant: standard measures of democracy were shown to have *positive* impacts on the odds of militarized conflict in every model that controlled for contract flows, with the positive impact of binary (Polity >+6) democracy even reaching significance when regime difference is considered.

Second, there is no justification for saving the democratic peace hypothesis on the contention that democracy and capitalism are the same thing. They are not: the variables correlate at only 0.47, and, with their binary definitions, more than half—55%—of all democratic nation-years are with nations with personalist economies. At the dyadic level, this translates to 80 percent of democratic dyads have at least one state that has a personalist economy. The analyses thus showed that the vast majority—80 percent—of democratic dyads are, if anything, *more* likely than others to have militarized conflict. If these results do not lead to the inference that the democratic peace is probably spurious, I am not sure what can.

Dafoe puts to paper a common confusion of cumulation with accumulation: "as the number of studies supporting the descriptive inference of the democratic peace continues to grow, the probability of a future study overturning this finding becomes increasingly less likely" (2011:14). This is not scientifically correct: repeated studies with specification bias do not render a finding any more accurate than a single one. If it did, then scientific progress would collapse into a race of competing viewpoints over publication numbers; editors, rather than evidence, would emerge as the arbiters of truth.[12] While numerous studies have corroborated the democratic peace, not a single one of these studies controlled for impersonal economy, a proven powerful variable predicted by a new and highly corroborated theory. New ideas can always emerge, and there is no logic in resisting them simply because a prior view was widely accepted as fact: the world is not flat.

With this study, there are several crucial tasks for the future. First and foremost, as with any study, the results here must be given careful scrutiny, and these data are available for anyone wishing to dissect them. Any found error is trivial, however, unless it is shown that, when corrected, democracy flips from positive back to negative and significant. It is conceivable that, with various tweaks of Model 5 in Table 1, which excludes control for Regime Difference, the highly stringent +10 democracy measure may be found minimally significant. But, absent some theoretical justification, a democratic peace that appears only without control for the high level of conflict in regime-mixed dyads would still be spurious. More importantly, all research must be assessed in the larger context with which it is embedded (Lakatos 1978[1970]: 87-88). Compared with most theories of democratic peace, economic norms theory has a much larger repertoire of explanatory value and predictive successes, crossing multiple levels of analyses.[13] Causation has also been traced in case studies, such as the Greek transition from personal to impersonal economy, and related changes in its domestic and foreign politics, in the 1990s (Mousseau

2009:76-81); and Argentine and British motives to fight the Falklands/Malvinas War (Mousseau 2012b).

Second, it would be useful to pit specific measures from the most promising democratic peace theories against impersonal economy. For instance, selectorate theory (Bueno de Mesquita et al. 1999) may still be robust, when selectorates are measured directly, against impersonal economy. Also, stable borders that may cause both democracy and peace (Gibler 2012; Rasler and Thompson 2005) may yet be found robust after consideration of impersonal economy. Stable borders may even be a cause of impersonal economy—and thus have the potential to render the social-market peace spurious. Finally, some other third variable could cause both contract flows and peace. All that can be said as of this writing is that the cumulative state of evidence is that democracy is not a likely cause of peace among nations: impersonal economy is the more likely cause of both democracy and peace.

If the results of this study remain unchallenged, then the democratic peace research program must go through a substantial transformation. In Lakatosian philosophy of science, the social-market economic peace can be viewed as an emendation to the democratic peace research program, adding heuristic power through its explanation of the causes of both democracy and peace, while receiving both corroboration of its novel content and excess corroboration over previous explanations. Imre Lakatos (1978[1970]) explicitly identifies examples of inconsistent theories being grafted onto existing research programs, eventually overtaking the original programs. This is constitutive of a progressive problem-shift, while in some interpretations it could even be conceived of as an ideal form (Ungerer 2012). With such a shift there is potential for a great deal of progress, with a wide open frontier of promising research needed on the possible causes of both impersonal economy and its precise linkages with both peace and cooperation, within and among nations; the field is also wide open for modeling strategic interactions in various economic kinds of dyads and, among nations with impersonal economies, collective action problems in their management and preservation of the global economy.

Finally, this study carries direct implications for public policy: if democracy is not a cause of peace, then there is no point in promoting democracy with the goal of achieving peace, as did both the Clinton and W. Bush U.S. Administrations. Instead, peace follows from impersonal economy—the condition when most citizens in a nation have free choice in the marketplace for obtaining their incomes, goods, and services. This means the capitalist powers are best advised to go back to the policies the Truman Administration adopted intuitively for post-war WWII Europe: helping most citizens obtain a stake in the impersonal market by making opportunities in it widely available. In this way economic norms theory informs us that it is politics that determines economics, and it is up to political leaders to make the decisions to do whatever it takes to make sure most citizens can normally find jobs in the marketplace. Anywhere this is achieved, the evidence informs us, democracy and peace will follow.

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Table 1. Capitalist Peace versus Democratic Peace in Analyses of Militarized Interstate Disputes, 1961 to 2001[±]

	Fatal Disputes				*All Disputes*	
Variables	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Contract-intensive	-	-0.81 ***	-0.79 ***	-0.86 ***	-0.25 **	-0.26 **
economy$_{L}$	-	0.15	0.14	0.15	0.08	0.08
Democracy$_{L}$	-0.06 *	0.02	-	0.04	-	-
	0.03	0.03	-	0.03	-	-
Democracy$_{Binary6}$	-	-	0.24	-	-	-
	-	-	0.45	-	-	-
Democracy$_{Binary10}$	-	-	-	-	-0.53	-0.15
	-	-	-	-	0.48	0.49
Regime difference[a]	-	-	-	0.06 **		0.05 ***
	-	-	-	0.02		0.01
Relative capability[b]	-0.26 **	-0.32 ***	-0.32 ***	-0.31 ***	-0.30 ***	-0.30 ***
	0.09	0.09	0.09	0.08	0.06	0.06
Major power[c]	1.31 **	1.67 ***	1.66 ***	1.55 ***	1.87 ***	1.80 ***
	0.44	0.43	0.44	0.44	0.24	0.24
Contiguity[d]	3.51 ***	3.46 ***	3.45 ***	3.59 ***	2.48 ***	2.55 ***
	0.43	0.43	0.43	0.41	0.22	0.21
Distance[e]	-0.45 ***	-0.54 ***	-0.54 ***	-0.54 ***	-0.41 ***	-0.43 ***
	0.12	0.12	0.12	0.11	0.08	0.07
Number of states[f]	0.00	-0.01 t	0.00	0.00 t	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00
Intercept	-3.03	-1.33	-1.51	-1.80	-1.42	-1.86
Psuedo log-likelihood	-1069	-1037	-1038	-1026	-4253	-4213
Psuedo R square	0.36	0.38	0.38	0.39	0.37	0.37
Observations	321,568	321,568	321,568	321,568	321,811	321,811

[±]Standard errors, corrected for clustering by dyad, in second row of each cell.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, t $p < 0.10$.
All independent variables lagged one year. Peace years and cubic spline variables, calculated separately for fatal and all disputes with consideration for disputes back to the start of the Cold War in 1947, not shown for reasons of space.
[a]Polity2 higher minus Polity2 lower, Polity IV data (Marshall and Jaggers 2003).
[b]COW Index of National Capability, higher/lower (logged+1) (Singer et al. 1972).
[c]At least one state is a major power (Small and Singer 1982).
[d]States are separated by less than 400 miles of water (Stinnett et al. 2002).
[e]Inter-capital distance (logged+1).
[f]Number of states in system.

Table 2. Tests for Spuriousness in the Market-Capitalist Peace, Fatal Militarized Interstate Disputes 1961 to 2001[±]

Variables	*Correlation with CIE_L*	*Model 1*	*Model 2*	*Model 3*	*Model 4*
CIE_L	1.00	-0.70 ***	-0.62 ***	-0.61 ***	-0.74 **
		0.14	0.15	0.15	0.22
$Wealth_L$[a]	0.57	-0.24	-	-	-
		0.27	-	-	-
$Trade_L$[b]	0.31	-	-1.46 *	-	-
		-	0.66	-	-
Capital $openness_L$[c]	0.38	-	-	-0.12 t	-
		-	-	0.06	-
$Public_H$[d]	-0.15	-	-	-	-0.01 *
		-	-	-	0.01
Relative capability	0.01	-0.31 **	-0.37 ***	-0.31 **	-0.14
		0.09	0.09	0.10	0.11
Major power	0.13	1.73 ***	1.86 ***	1.24 *	0.89
		0.45	0.44	0.50	0.75
Contiguity	0.07	3.49 ***	3.52 ***	3.55 ***	4.25 ***
		0.43	0.42	0.47	0.62
Distance	-0.04	-0.55 ***	-0.58 ***	-0.54 ***	-0.32 *
		0.12	0.12	0.12	0.15
Number of states	0.08	0.00	0.00	0.01 *	-0.02 *
		0.00	0.00	0.01	0.01
Intercept		-1.64	-1.24	-4.30 **	-0.15
Psuedo LL		-1045	-1019	-631	-264
Psuedo R square		0.38	0.38	0.40	0.43
Observations		328,181	323,080	206,800	123,626

[±]Standard errors, corrected for clustering by dyad, in second row of each cell.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, t $p < 0.10$.
All independent variables lagged one year. Peace years and cubic spline variables not shown.
[a]Energy consumption per capita logged, COW Index of National Capability (Singer et al. 1972).
b$(Exportsij+imports_{ij})/GDP_i$, lower (Gleditsch 2002).
[c]Index of government restrictions on foreign exchange, current, and capital accounts, lower (Gartzke 2007:174).
[d]Proportion of state revenue from non-tax sources, higher of both states in the dyad (McDonald 2009: 79).

ENDNOTES

[1] To date, empirical corroboration of novel facts includes: the economic conditionality to the democratic peace (Mousseau 2000); cooperation (Mousseau 2002) and common preferences (Mousseau 2003) among nations; variance in social trust within nations (Mousseau 2009: 61), state respect for human rights (Mousseau and Mousseau 2008), public support for terrorism (Mousseau 2011), and the onset of civil wars (Mousseau 2012a).

[2] For the most recent comprehensive review of the democratic peace literature, see Ungerer (2012).

[3] Nothing is said here regarding actions that have costs, so there can be no collective goods dilemma resulting from the predicted change in preferences.

[4] The primary exception to this general rule would be cases where rent-seeking supporters of a personalist state rely on exports. Usually this involves natural resource exports, such as oil. Even in these cases, however, the personalist state is usually concerned narrowly on the specific market for the particular export, not the general vitality of the global market.

[5] Specifically, I obtained the Dyadic Militarized Interstate Disputes Dataset, ver. 1.1 (Maoz 2005).

[6] That is, in the Polity IV democracy data (Marshall and Jaggers 2003), and the Penn World Tables data (Heston et al. 2002) with populations greater than 500,000.

[7] Details in the construction of the imputed data can be reviewed and replicated at http://author. All results in Tables 1 and 2 below are identical using the original non-imputed data with missing values deleted.

[8]See Choi (2011, 783-784) for superiority of the Regime Difference measure over $Democracy_H$, the higher democracy score in a dyad, which nullifies the purpose of the weak link assumption and leads to a biased estimation of $Democracy_{L.}$

[9] Wealth is gauged using energy consumption per capita. Results are identical using gross domestic product (GDP) per capita, but energy consumption is preferred because GDP and CIE are axiomatically related as GDP is partly constructed from data on contract flows reported to government agencies. We should refrain from including variables that are axiomatically-related in common regressions (Ray 2003). Also, because GDP is partly constructed from data on contract flows it is comparatively biased towards impersonal economy. As expected, CIE_L correlates with GDP a bit higher at 0.71.

[10] I thank Erik Gartzke and Patrick McDonald for kindly sending me their data.

[11] Putting all variables in Table 2 in a common regression yields a sample reduced by 73% due to severe data limitations caused by the variables $Capital\ Openness_L$ and $Public_H$. Nevertheless, CIE_L is negative and highly robust even in this very small, biased, and crowded sample (unreported).

[12] Of course, some of this might be going on anyway, as highlighted by Kuhn (1960).

[13] See footnote 1.